

### **REMARKS**

This Amendment is in response to the Office Action mailed April 4, 2006, wherein the Examiner rejected claims 1-17, all the claims in the application. Reconsideration of the application in view of the amendments presented herewith and the following remarks is respectfully requested.

Initially, Applicant would like to thank the Examiner for the careful consideration given this case. In response, Claims 1-17 have been canceled and new Claims 18-30 have been added. New Claims 18-30 introduce no new matter and are fully supported by the specification. Applicant respectfully requests entry of the amendments as they place the application in condition for allowance or in better condition for possible appeal.

Prior to discussing the rejections, Applicant takes this opportunity to set forth the following brief remarks about his new filter sensor and indicator for vacuum cleaners.

Applicant's unique new filter sensor and indicator for vacuum cleaners provides a signal to a user that a filter in a vacuum cleaner requires cleaning or replacing. (See Abstract.) More specifically, Applicant's filter monitor senses the air pressure in a flow chamber of a vacuum cleaner where the flow chamber is located between the filter and a flow inducing device selectively driven by the power source. The filter monitor includes an electrical circuit including a pressure actuated switch and an indicator connected to the circuit where the pressure actuated switch is closed to complete the circuitry between the indicator and electrical power source in response to the pressure in the flow chamber falling below a pre-determined minimum pressure threshold thereby indicating that the filter requires cleaning or replacement. In other words, the pressure actuated electrical switch measures the pressure between the filter and motor to determine a filter condition suggesting cleaning or replacement.

None of the cited references disclose or suggest a filter sensor and indicator for a vacuum cleaner as disclosed and claimed in the application. In fact, none of the cited references even mention or suggest a filter sensor and indicator for vacuum cleaners where the pressure actuated switch is closed to complete the circuitry between the indicator and electrical power source in response to the pressure in the flow chamber falling below a pre-determined minimum pressure threshold thereby indicating that the filter requires cleaning or replacement. Thus, Applicant is

entitled to claim the filter sensor and indicator for vacuum cleaners where the pressure actuated switch is closed to complete the circuitry between the indicator and electrical power source in response to pressure in the flow chamber falling below a pre-determined minimum pressure threshold thereby indicating that the filter requires cleaning or replacement.

**Rejection Based On Martin Under 35 U.S.C. 102(b)**

The Examiner rejected Claims 1-3, 5-7 and 12-15 under 35 U.S.C. § 102 (b) as being anticipated by U.S. Patent No. 4,733,431 to Martin ("Martin") as applied to new Claims 18-30. Applicant respectfully traverses this rejection for the following reasons.

For a rejection to be sustained under 35 U.S.C. § 102 (b) each and every element of the claimed invention must be disclosed in the cited prior art. Martin discloses a vacuum cleaner with performance monitoring system that "includes sensors for monitoring the differential pressure between (1) an intake port and the dust collecting compartment, (2) the outside of the vacuum cleaner and the intake port and (3) the discharge from the vacuum cleaner and the dust collecting compartment." See Col. 2 lines 40-45. However, Martin does not disclose a pressure actuated electrical switch that responds the pressure in the flow chamber falling below a pre-determined minimum pressure threshold thereby indicating that the filter requires cleaning or replacement. In Applicant's invention, the pressure of the flow chamber located between the filter and the flow inducing device is measured. Moreover, the three sensors in Martin measures the pressure in different areas in the vacuum cleaner. Further, Martin discloses a canister type vacuum cleaner with a dust bag mount. In other words, Martin's invention is directed to a vacuum cleaner with a dust bag.

In marked contrast to the sensor in Martin, Applicant's filter sensor and indicator for vacuum cleaners invention may be used with a bagless vacuum cleaner. Applicant's claims call for a filter to which the filter monitor is connected. Further, in Applicant's filter sensor and indicator, the pressure actuated electrical switch measures the pressure in the flow chamber to see if it is below a pre-determined minimum pressure threshold to determine if the filter requires cleaning or replacement. Martin does not teach a filter sensor and indicator for vacuum cleaner that measures the pressure in the flow chamber to see if it is below a pre-determined minimum pressure threshold

to determine if the filter requires cleaning or replacement, as claimed in new independent Claims 18 and 26, respectively. In view of this lack of teaching in Martin, Martin does not disclose each and every claim element of the claimed invention as required to sustain a rejection under § 102(b). Accordingly, Applicant respectfully requests that the rejection under 35 U.S.C. § 102 (b) be reconsidered and withdrawn.

**Rejection Based On DE 36 43 378 A1 Under 35 U.S.C. 102(b)**

The Examiner rejected Claims 1 and 2 under 35 U.S.C. § 102 (b) as being anticipated by German Published Patent Application DE 36 43 378 A1 as applied to new Claims 18-30. Applicant respectfully traverses this rejection for the following reasons.

For a rejection to be sustained under 35 U.S.C. § 102 (b) each and every element of the claimed invention must be disclosed in the cited prior art. DE 36 43 378 A1 discloses a method and device for indicating malfunction in a vacuum cleaner by measuring the pressure difference either occurring at the filter or the sum of the pressure upstream and downstream of the filter. See Abstract. However, DE 36 43 378 A1 does not disclose a pressure actuated electrical switch that responds to the pressure in the flow chamber falling below a pre-determined minimum pressure threshold thereby indicating that the filter requires cleaning or replacement.

In Applicant's invention, only the pressure of the flow chamber located between the filter and the flow inducing device is measured and compared to a pre-determined minimum pressure threshold to determine if the filter requires cleaning or replacement. DE 36 43 378 A1 does not teach a filter sensor and indicator for vacuum cleaner that measures the pressure in the flow chamber to see if it is below a pre-determined minimum pressure threshold to determine if the filter requires cleaning or replacement, as claimed in new independent Claims 18 and 26, respectively. In view of this lack of teaching in DE 36 43 378 A1, DE 36 43 378 A1 does not disclose each and every claim element of the claimed invention as required to sustain a rejection under § 102(b). Accordingly, Applicant respectfully requests that the rejection under 35 U.S.C. § 102 (b) be reconsidered and withdrawn.

**Rejection Based On Kurz In View Of Martin Under 35 U.S.C. § 103 (a)**

The Examiner rejected Claims 1-3 and 5-16 under 35 U.S.C. § 103 (a) as being unpatentable over U.S. Patent No. 4,233,597 to Kurz ("Kurz") in view of U.S. Patent No. 4,733,431 to Martin ("Martin") as applied to new Claims 18-30. Applicant respectfully traverses this rejection for the following reasons.

The Examiner has conceded that Kurz is silent as to the specific construction of the vacuum cleaners and that Kurz does not disclose a vacuum cleaner having a flow chamber between the filter and the flow inducing device. The Examiner then refers Martin to cure this deficiency. Accordingly, the Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the upstream filter arrangement of Martin into the vacuum cleaner of Kurz to allow the filter to collect dust prior to the air reaching the motor to increase the life expectancy of the motor. Applicant respectfully disagrees.

In order to establish obviousness of a claimed invention, all elements of the claims must be disclosed, taught or suggested by the prior art. None of the references teach Applicant's filter sensor and indicator, which measures the pressure between the filter and motor to determine a filter condition suggesting cleaning or replacement.

Applicant agrees with the Examiner that Kurtz does not disclose a vacuum cleaner having a flow chamber between the filter and the flow inducing device. Kurtz discloses an apparatus for indicating pressure variation cause by the accumulation of dust in dust bags in a vacuum cleaner. See Abstract. However, Kurtz does not mention the specific construction of the vacuum cleaners. Further, Kurz's invention as is Martin's is directed to a vacuum cleaner with a dust bag. This is unlike the present invention in which the filter sensor and indicator may also be used with a bagless vacuum cleaner.

As discussed above, Martin discloses a vacuum cleaner with performance monitoring system that includes three sensors for monitoring the differential pressure between (1) an intake port and the dust collecting compartment, (2) the outside of the vacuum cleaner and the intake port and (3) the discharge from the vacuum cleaner and the dust collecting compartment. See Col. 2 lines 40-45. However, Martin does not disclose a pressure actuated electrical switch that responds when the pressure in the flow chamber is below a pre-determined minimum pressure threshold indicating that

the filter requires cleaning or replacement. Moreover, the three sensors in Martin measures pressure different areas for use with a canister type vacuum cleaner with a dust bag.

None of the cited references disclose or suggest Applicant's filter sensor and indicator for vacuum cleaners including the pressure actuated electrical switch that measures the pressure between the filter and motor to determine the filter condition suggesting cleaning or replacement. Thus, Applicant is entitled to claim the filter sensor and indicator for vacuum cleaners including a the pressure actuated electrical switch that measures the flow chamber pressure between the filter and motor to determine a filter condition suggesting cleaning or replacement as set forth in new independent Claims 18 and 26.

Applicant respectfully submit that the claimed filter sensor and indicator for vacuum cleaners is not obvious over the teaching of Kurtz in view of Martin. In addition, one skilled in the art would find nothing in Kurtz or Martin alone or in combination that would disclose, teach or suggest the claimed composition or any reason for making it. This is because there is no motivation taught in any of the references to combine the references in such a way to provide the filter sensor and indicator for vacuum cleaners as claimed. Accordingly, Applicant respectfully requests that the rejection under 35 U.S.C. § 103 (a) be reconsidered and withdrawn.

**Rejection Based On Martin, DE 35 43 378 A1 Or Kurz In View Of Martin And Further In View Of Naquin, Jr. Under 35 U.S.C. § 103 (a)**

The Examiner rejected Claims 4 and 17 under 35 U.S.C. § 103 (a) as being unpatentable over U.S. Patent No. 4,733,431 to Martin ("Martin"), German Published Patent Application DE 36 43 378 A1 or U.S. Patent No. 4,233,597 to Kurz ("Kurz") in view of Martin as applied to Claims 1 or 12 above and further in view of U.S. Patent No. 5,917,141 to Naquin, Jr. ("Naquin, Jr.") as applied to new Claims 18-30. Applicant respectfully traverses this rejection for the following reasons.

The Examiner has conceded that Martin, DE 36 43 378 A1 or Kurtz does not disclose the indicator being an audible indicator or a light emitting diode. The Examiner then refers to Naquin, Jr. to cure this deficiency. Accordingly, the Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the audible alarm

and LED of Naquin, Jr. into the filter monitors of Martin, DE 36 43 378 A1 or Kurz in view of Martin to allow an operator to be alerted of the clogged filter condition even if they are not looking at the vacuum cleaner and to provide light having a long life and low energy requirement, respectively. Applicant respectfully disagrees.

In order to establish obviousness of a claimed invention, all elements of the claims must be disclosed, taught or suggested by the prior art. None of the references teach Applicant's filter sensor and indicator that measures the pressure between the filter and motor to determine a filter condition suggesting cleaning or replacement.

As stated above, both Martin, DE 36 43 378 A1 or Kurtz do not disclose Applicant's filter sensor and indicator for vacuum cleaners including a the pressure actuated electrical switch that measures the pressure between the filter and motor to determine a filter condition suggesting cleaning or replacement.

In regards to Naquin, Jr., Naquin, Jr. discloses an air filter monitoring device attachable to the cover grate of an air return of an air conditioning system that can detect a clogged filter condition and provides an alerting output. See Column 1, lines 50-53. However, Naquin, Jr. does not disclose a filter sensor and indicator directed to vacuum cleaners. One skilled in the art would not look to Naquin, Jr. to correct the deficiency in Martin, DE 36 43 378 A1 and Kurz which is directed to vacuum cleaners not air conditioners. In view of the subject matter of Naquin, Jr., Applicant respectfully submits that the three references are not properly combined.

Applicant respectfully submit that the claimed filter sensor and indicator for vacuum cleaners is not obvious over the teaching of Martin, DE 36 43 378 A1 or Kurtz in view of Naquin. In addition, one skilled in the art would find nothing in Martin, DE 36 43 378 A1, Kurtz or Naquin alone or in combination that would disclose, teach or suggest the claimed composition or any reason for making it. This is because there is no motivation taught in any of the references to combine the references in such a way to provide the filter sensor and indicator for vacuum cleaners as claimed. Accordingly, Applicant respectfully requests that the rejection under 35 U.S.C. § 103 (a) be reconsidered and withdrawn.

It is respectfully submitted that in view of the amendment and above remarks, the application is in condition for final allowance. Accordingly, the Examiner is respectfully requested to review that application at an early date with a view towards issuing a favorable action thereon. If upon review of the application the Examiner is unable to issue an immediate Notice of Allowance, the Examiner is requested to telephone the undersigned attorney with a view towards resolving any outstanding issues.

Early and favorable action is earnestly solicited.

Respectfully submitted,

By: Sylvia Tan Reg. No 47,324  
for Michael I. Wolfson  
Registration No. 24,750  
Attorney for Applicant  
GREENBERG TRAURIG, LLP  
200 Park Avenue  
New York, NY 10166  
Tel.: (212) 801-9200